CLAIMS:

1. A method (M) to detect a noise signal (PS1, PS2, PS3) in a digital audio signal (EAS), wherein:

- the digital audio signal (EAS) is divided into successive signal sections (SAS);
- the energy contents of successive signal sections (SAS) are determined;
- the energy contents of a signal section (SAS) are evaluated in relation to an energy threshold (ET);
- the occurrence of at least one high-energy signal section having an energy content above the energy threshold (ET), and the occurrence of at least one signal section (SAS) preceding the at least one high-energy signal section and having an energy content below the energy threshold (ET), and the occurrence of at least one signal section (SAS) following the at least one high-energy signal section and having an energy content below the energy threshold (ET) are detected; and
- a quantity of signal sections (SAS) that precede the at least one high-energy signal section (SAS) and a quantity of high-energy signal sections and a quantity of signal sections (SAS) that follow the high-energy signal section are counted.

2. A method (M) as claimed in claim 1, wherein:

- the energy contents of a signal section (SAS) are determined in accordance with the formula

$$E = 10\log_{10}\left(\frac{1}{N}\sum_{k=1}^{N} S_k^2\right);$$

- S_k represents the signal amplitudes within the signal section (SAS), and wherein N represents the total quantity of signal amplitudes within the signal section (SAS).

3. A method (M) as claimed in claim 1, wherein the energy threshold (ET) is determined continuously from the digital audio signal (EAS) on the basis of a histogram method applied to the energy contents of the signal sections (SAS), taking account of a quickly changing background level and with the aid of a ratio between a useful-signal level and a noise level of the audio signal (EAS).

4. A method (M) as claimed in claim 1, wherein the signal sections (SAS) exhibit a signal-section duration (P) of between two milliseconds and ten milliseconds.

5. A method (M) as claimed in claim 1, wherein each of the signal sections (SAS) exhibits a signal-section duration (P) of five milliseconds.

6. A method (M) as claimed in claim 1, wherein:

- it is established whether the energy contents of l successive high-energy signal sections exceed the energy threshold (ET), wherein l lies between 3 and 7;
- it is established whether the energy contents of m successive signal sections (SAS) preceding the high-energy signal sections fall below the energy threshold (ET), wherein m is equal to or greater than 9; and
- it is established whether the energy contents of n successive signal sections (SAS) following the high-energy signal sections fall below the energy threshold (ET), wherein n is equal to or greater than 30.

7. A method (M) as claimed in claim 1, wherein:

- it is established whether, subsequent to high-energy signal sections, during signal sections (SAS) following these high-energy signal sections, which exhibit an energy content below the energy threshold (ET), further high-energy signal sections follow; and
- the quantity of high-energy signal sections and the quantity of signal sections (SAS) which follow the further high-energy signal sections are counted.

8. A device (1) to process a digital audio signal (EAS), which is equipped with noise-signal detection means (6), which are designed to detect a noise signal (PS1, PS2, PS3) in the audio signal (EAS), wherein:

- audio-signal subdivision means (7), which are designed to subdivide the audio signal (EAS) into successive signal sections (SAS), are provided;
- energy-contents determination means (8), which are designed to determine the energy contents of successive signal sections (SAS), are provided;
- energy-contents evaluation means (12), which are designed to evaluate the energy contents of a signal section (SAS) in relation to an energy threshold (ET), are provided; and

- occurrence detection means (13), which are designed to detect the occurrence of at least one high-energy signal section having an energy content above the energy threshold (ET), and to detect the occurrence of at least one signal section (SAS) preceding the at least one high-energy signal section and having an energy content below the energy threshold (ET), and to recognize the occurrence of at least one signal section (SAS) following the at least one high-energy signal section and having an energy content below the energy threshold (ET) are provided, and wherein counting means (11), which are designed to count a quantity of signal sections (SAS) that precede the at least one high-energy signal section and to count a quantity of high-energy signal sections and to count a quantity of signal sections (SAS) that follow the at least one high-energy signal section, are provided.

9. A device (1) as claimed in claim 8, wherein supply means (14), which are designed to supply a noise-signal-free audio signal (DASO), taking account of the detected noise signal (PS1, PS2, PS3), are provided.

10. A computer program product (27), which can be loaded directly into a memory (23) of a computer (19), and comprises software code sections, wherein the method (M) in accordance with claim 1 can be implemented with the computer (19) when the computer program product (27) is implemented on the computer (19).

11. A computer program product (27) as claimed in claim 10, wherein the computer program product (27) is stored on a computer-readable medium (26).

12. A computer (19) with a processor unit (24) and an internal memory (23), which implements the computer program product (27) as claimed in claim 10.